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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,704	12/31/2003	Fang Xu	TER-021PUS	9210
22494 7590 12/20/2006 DALY, CROWLEY, MOFFORD & DURKEE, LLP SUITE 301A 354A TURNPIKE STREET CANTON, MA 02021-2714			EXAMINER NGUYEN, LINH V	
			ART UNIT	PAPER NUMBER
			2819	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/20/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/749,704

Applicant(s)

XU, FANG

Examiner

Linh V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9, 10 and 15 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 11-14 and 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/24/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to communication filed on 12/31/03. Claims 1 – 19 are pending on this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 – 6, 9 and 10 are rejected under 35 U.S.C. 102(a) as being anticipated by Soltanian et al. Pub. No.: 2003/0174079.

Regarding claim 1, Fig. 3 and 4 of Soltanian et al. discloses a testing architecture for automatic test equipment (paragraph 0079), comprising: a signal source (1); and a plurality of source/capture channels (9, 10), said signal source (1) coupled to at least one of said channels (9, 10) for providing a signal cancellation signal (11) for reducing an amplitude of a signal (output of 6) received by said channel (9).

Regarding claim 2, wherein said signal source comprises a Digital-to-Analog Converter (46).

Regarding claim 3, wherein said system further comprises an external adjustment device (7 is external to 40 and 1 and 9) coupled between said source (1) and said plurality of source/capture channels (9).

Regarding claim 4, wherein at least one of said at least one source/capture channels (9) comprises a capture Analog-to-Digital Converter (9) capable of receiving a signal from a device under test (6).

Regarding claim 5, wherein at least one of said at least one source/capture channels (9) further comprises a combiner (11) receiving a cancellation signal (output of 40) from said signal source (42), receiving a signal under test (output of 6), and providing a residual signal (output of 11) from said cancellation signal (output of 40) and said signal under test (output of 6) to said ADC (9).

Regarding claim 6, wherein at least one of said at least one source/capture channels (9) further comprises: a combiner (11) receiving a cancellation signal (output of 40) from said signal source (42), receiving a signal under test (output of 6), and providing an output signal (output of 11) from said cancellation signal (output of 40) and said signal under test (output of 6); and an amplifier (7) receiving said output signal from said combiner (11) and providing an output to said ADC (9).

Regarding claim 9, wherein at least one of said at least one source/capture channels (9) further comprises an amplifier (2) receiving a signal from said signal source (1) and providing an output to a device under test (6).

Regarding claim 10, wherein at least one of said at least one source/capture channels (9) further comprises a Digital-to-Analog (D46) providing an output to a device under test (3).

5. Claim 15 is rejected under 35 U.S.C. 102(a) as being anticipated by Sasaki et al. U.S. patent No. 6,667,702.

Regarding claim 15. Fig. 2 of Sasaki et al. disclose a reconfigurable testing architecture (10) for automatic test equipment (40), comprising: a signal source (Nin, Yin, Cin); and a plurality of channels (13) wherein said channels are each configurable into a plurality of modes (41), each of said modes providing a different level of precision from another of said modes (Col. 2 lines 50 – 60).

Allowable Subject Matter

6. Claim 7 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach wherein at least one of said at least one source/capture channels further comprises: a first combiner receiving a signal under test and a baseline signal, and providing a first combiner output signal; and a second combiner receiving a cancellation signal from said signal source, receiving said first combiner output signal and providing a second combiner output signal to said ADC.

Claim 8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach wherein at least one of said at least one source/capture channels comprises: a first combiner receiving a signal under test and a baseline signal, and providing a first combiner output signal; a second combiner receiving a cancellation signal from said signal source, receiving said first

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combiner output signal and providing a second combiner output signal; and an amplifier receiving said second combiner output signal and providing a residual signal to said ADC.

Claim 11 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach wherein said architecture is operable in a first mode wherein each channel is configured to perform a multiple capture, each channel comprising: a first combiner receiving a signal under test and a baseline signal, and providing a first combiner output signal; a second combiner receiving said first combiner output signal and providing a second combiner output signal; and an amplifier receiving said second combiner output signal and providing a residual signal to said ADC.

Claims 12 and 14 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach wherein said device is operable in a second mode wherein one channel of said plurality of channels is configured to perform a capture with signal cancellation, said channel comprising: a first combiner receiving a signal under test and a baseline signal, and providing a first combiner output signal; a second combiner receiving a cancellation signal from said signal source, receiving said first combiner output signal and providing a second combiner output signal; and an amplifier receiving said second combiner output signal and providing a residual signal to said ADC.

Claim 13 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach wherein said architecture is operable in a third mode wherein each channel of said plurality of channels is configured to perform a capture with signal cancellation, each channel comprising: a first combiner receiving a signal under test and a baseline signal, and providing a first combiner output signal; a second combiner receiving a cancellation signal from said signal source, receiving said first combiner output signal and providing a second combiner output signal; and an amplifier receiving said second combiner output signal and providing a residual signal to said ADC.

Claim 16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach wherein said plurality of modes includes a first mode wherein each channel is configured to perform a multiple capture, each channel comprising: a first combiner receiving a signal under test and a baseline signal, and providing a first combiner output signal; a second combiner receiving said first combiner output signal and providing a second combiner output signal; and an amplifier receiving said second combiner output signal and providing a residual signal to an ADC.

Claims 17 and 19 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach wherein said

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plurality of modes includes a second mode wherein one channel of said plurality of channels is configured to perform a capture with signal cancellation, said channel comprising: a first combiner receiving a signal under test and a baseline signal, and providing a first combiner output signal; a second combiner receiving a cancellation signal from said signal source, receiving said first combiner output signal and providing a second combiner output signal; and an amplifier receiving said second combiner output signal and providing a residual signal to an ADC.

Claim 18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art does not teach wherein said plurality of modes includes a third mode wherein each channel of said plurality of channels is configured to perform a capture with signal cancellation, each channel comprising: a first combiner receiving a signal under test and a baseline signal, and providing a first combiner output signal; a second combiner receiving a cancellation signal from said signal source, receiving said first combiner output signal and providing a second combiner output signal; and an amplifier receiving said second combiner output signal and providing a residual signal to an ADC.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Contact Information

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (571) 272-1810. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Rexford Barnie can be reached at (571) 272-7492. The fax phone numbers for the organization where this application or proceeding is assigned are (571-273-8300) for regular communications and (571-273-8300) for After Final communications.

LINH NGUYEN
PRIMARY EXAMINER

12/13/06

Linh Van Nguyen

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A handwritten signature in black ink, appearing to read 'Linh Van Nguyen', with a long horizontal flourish extending to the right.